



NORTH DAKOTA
DEPARTMENT *of* HEALTH

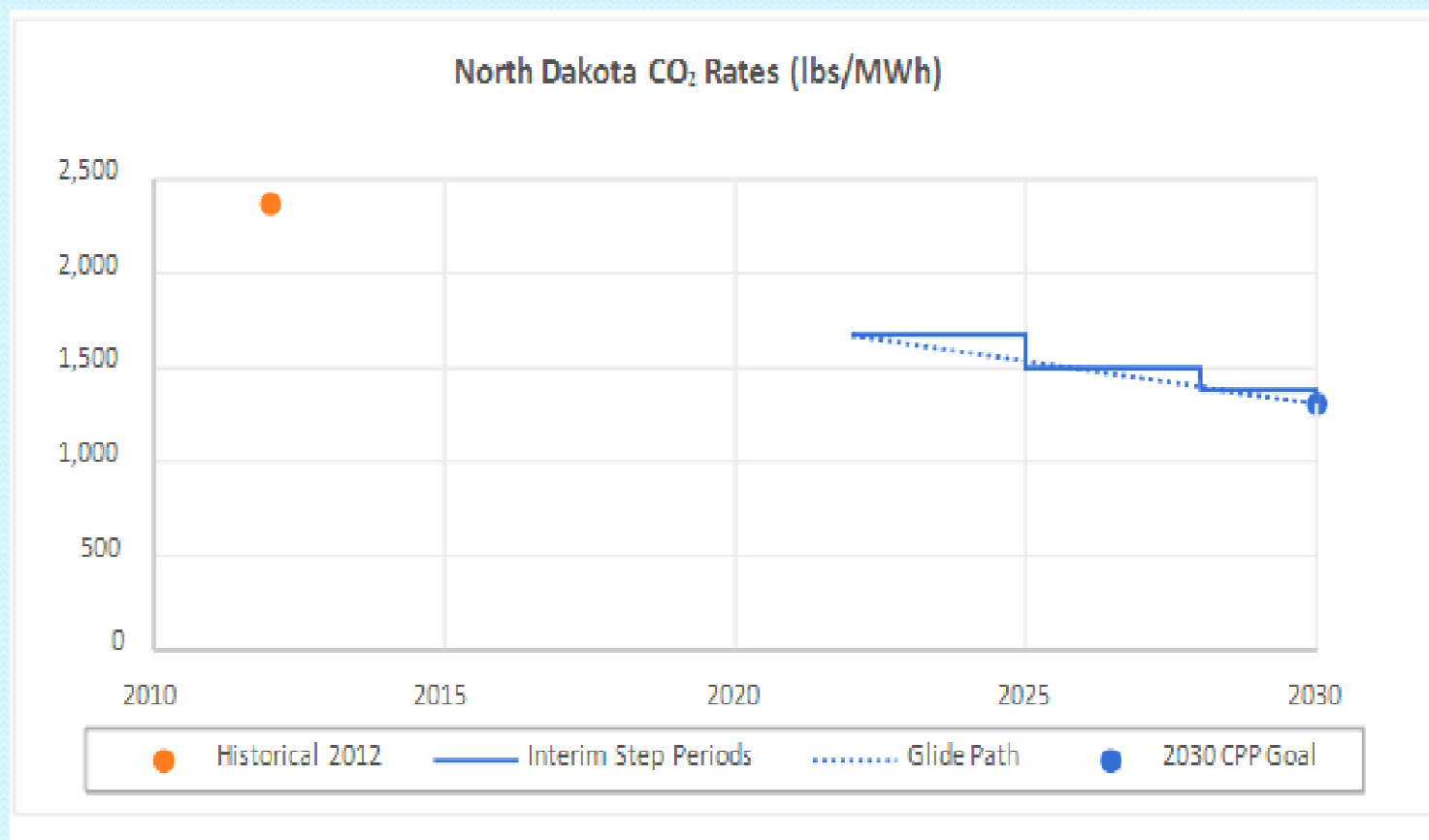
111(d) Plan Development

What is a 111(d) Plan?

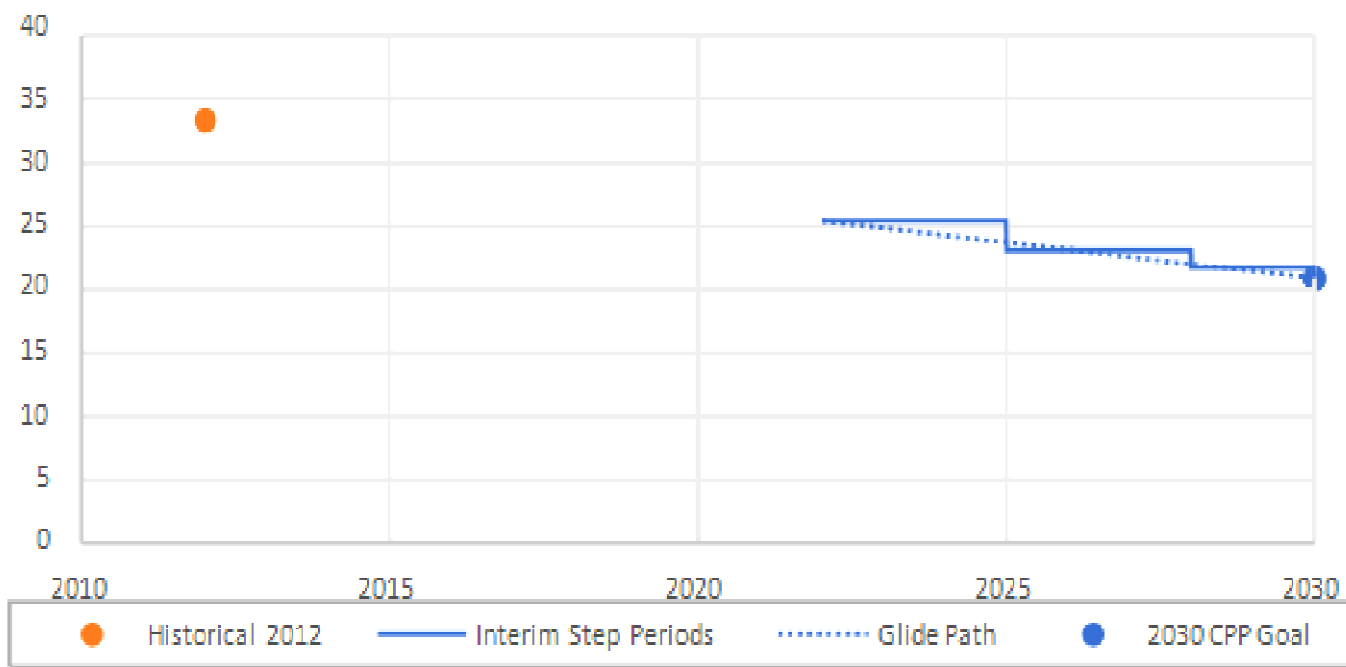
- **A 111(d) plan must detail how reductions of carbon dioxide (CO₂) emissions from existing fossil fuel-fired power plants will be achieved.**
- **The plan is required by EPA's final Clean Power Plan rule (40 CFR 60, Subpart UUUU).**
- **It includes both state and federally enforceable requirements on the power plant operators to reduce CO₂ emissions.**

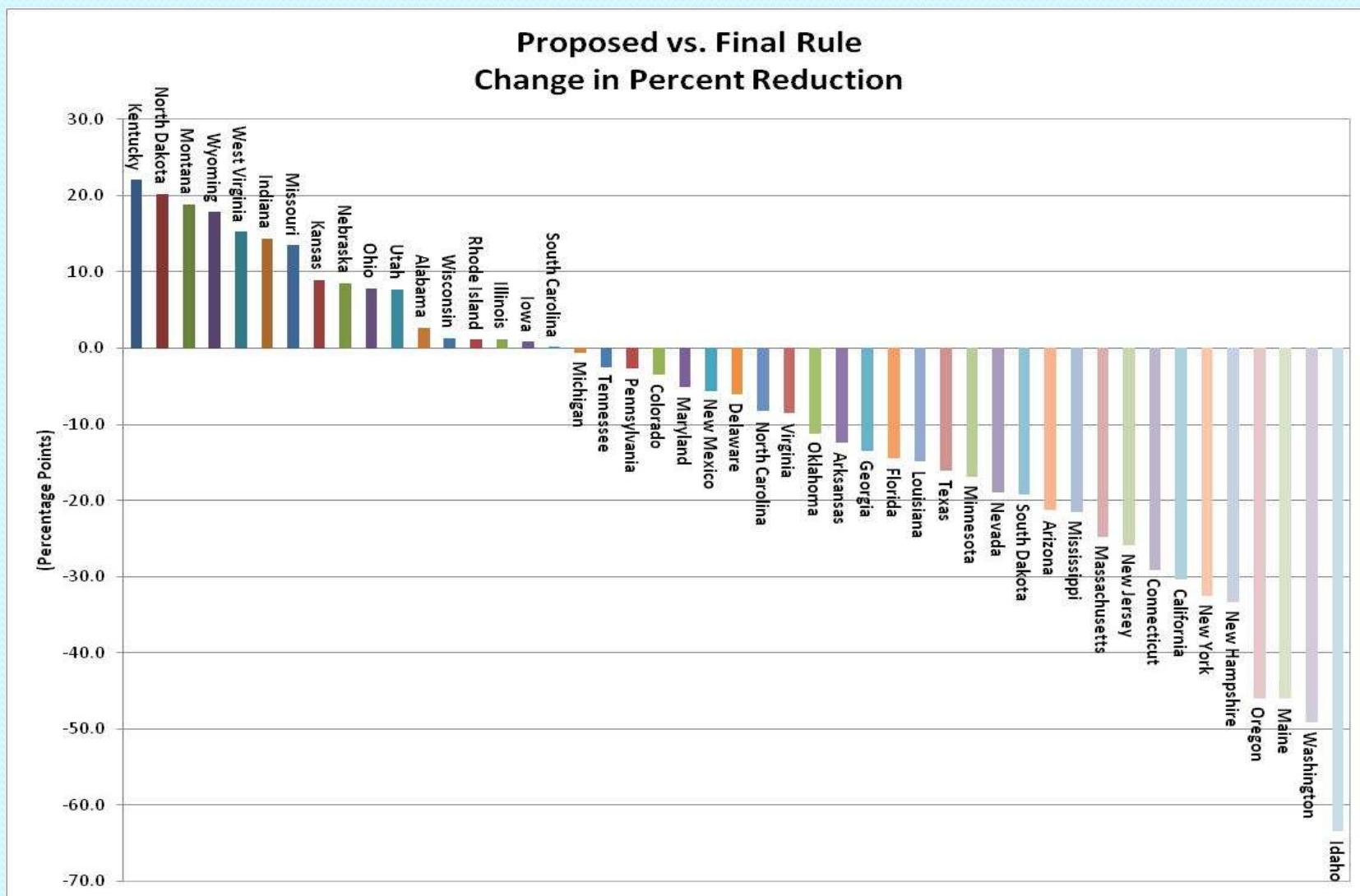
Proposed Rule vs. Final Rule

<u>ITEM</u>	<u>PROPOSAL</u>	<u>FINAL</u>
Start of Compliance Compliance with Final Goal	2020 2030	2022 2030
Final Goal Rate Mass	1,783 lb/MWh 29,843,573 tons	1,305 lb/MWh 20,883,232 tons
Interim Goal Period	2020-2029	2022-2029
Avg. Interim Goal Rate Mass	1,817 lb/MWe-Hr 30,403,643 tons	1,534 lb/MWe-Hr 23,632,821 tons
Reduction Required Rate Mass	24.7% 10.5%	44.9% 37.4%



North Dakota CO₂ Mass (million short tons)





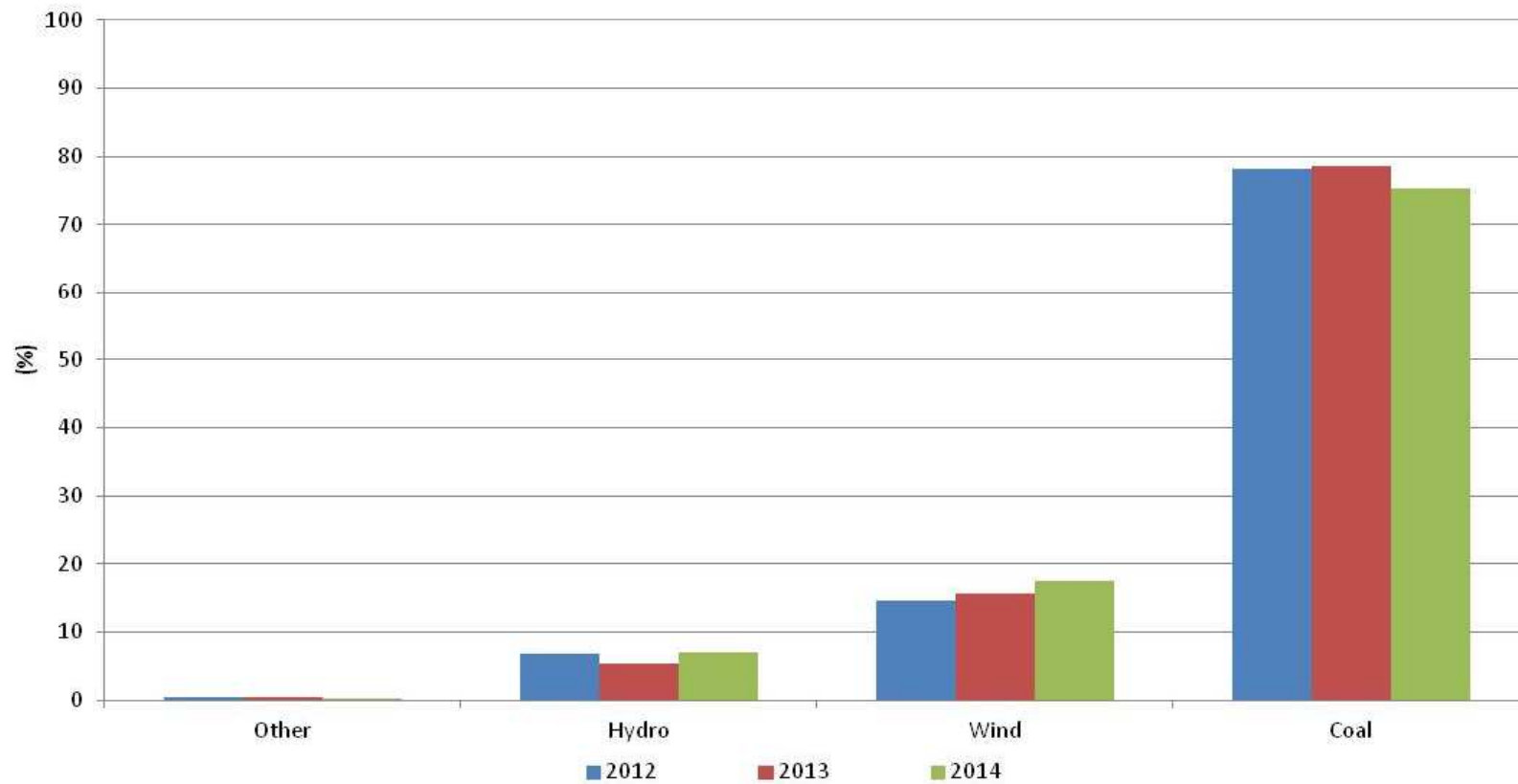
Proposed Rule vs. Final Rule

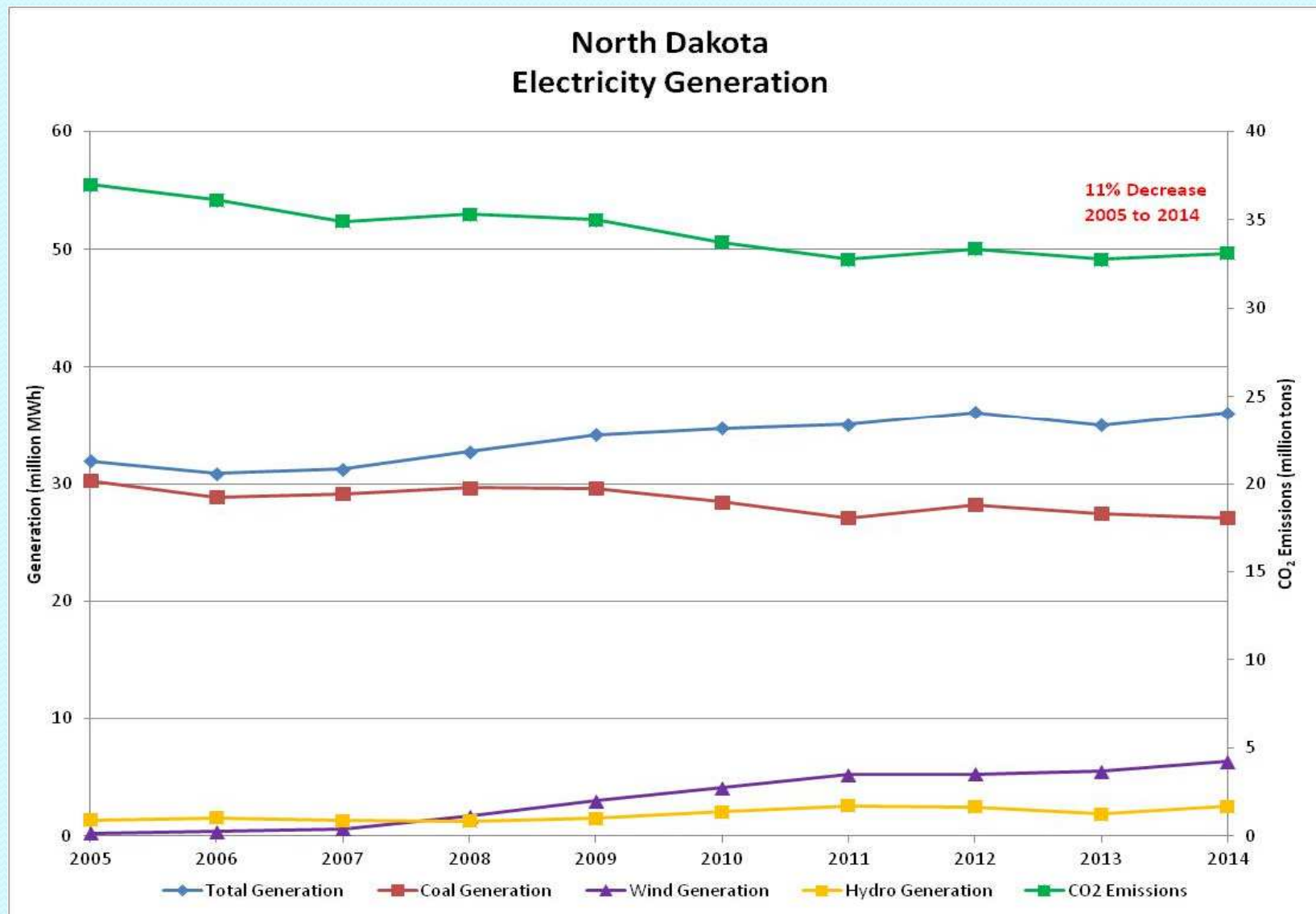
Nationwide Reduction from 2005 (mass)	30%	32%
Glide path	Single final number	Steps defined
Compliance	Any existing wind generation could be used for demonstrating compliance Interstate trading allowed but up-front agreements between the states required	Only renewable energy (including wind) constructed after December 31, 2012 may be used for demonstrating compliance. Up-front agreements not required if trading ready rules in plan
Incentives	None	Clean Energy Incentives Program
Reliability	No Safety Valve	Safety Valve included

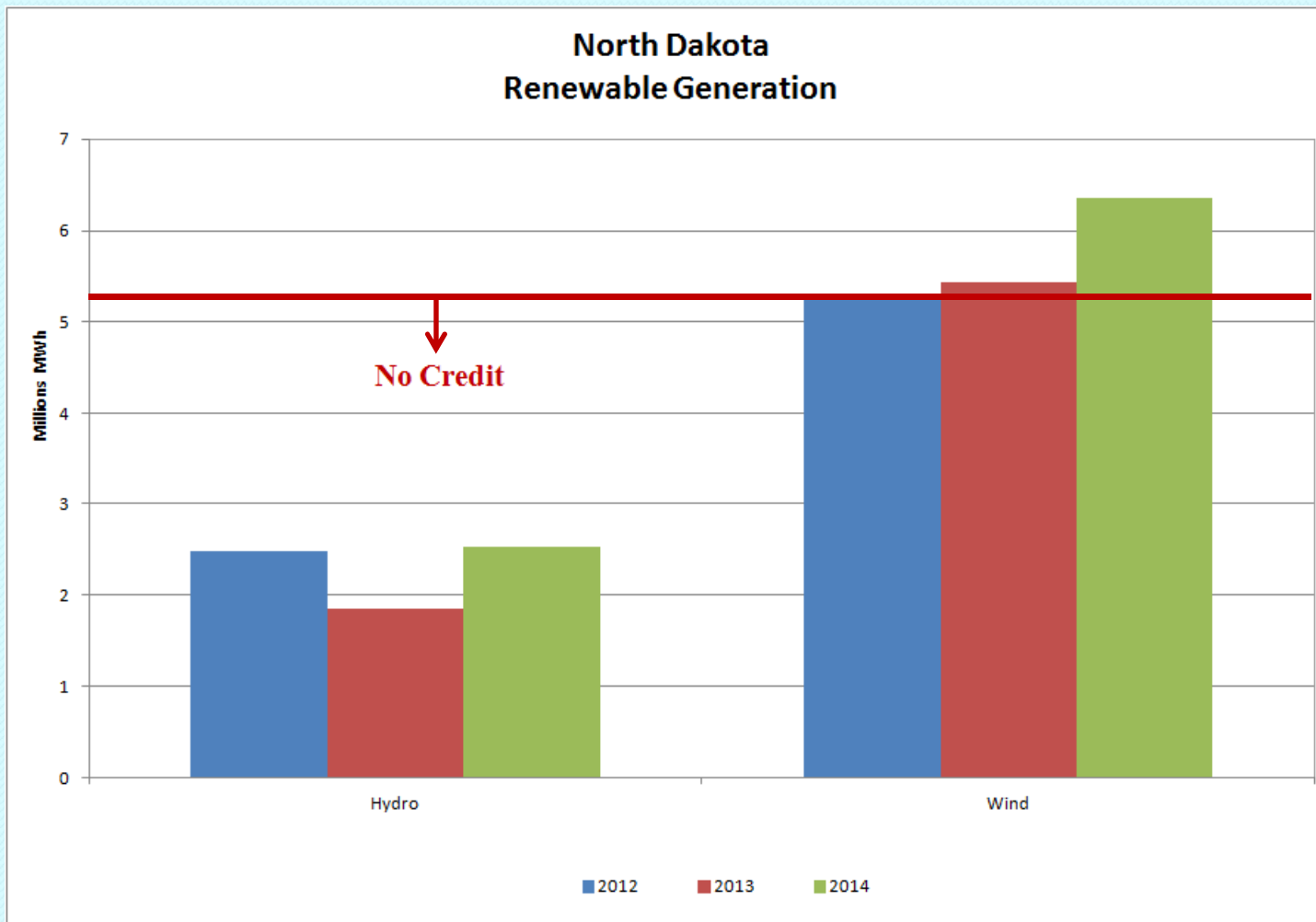
Federal (EPA) 111(d) Plan

- **State and industry have no control**
- **EPA plan to reduce CO₂ emissions in North Dakota**
- **EPA will dictate rate or mass**
- **EPA will define what sources or measures can create ERCs or allowances – fewer than a state may define**
- **EPA will oversee and enforce the plan**

North Dakota Net Generation

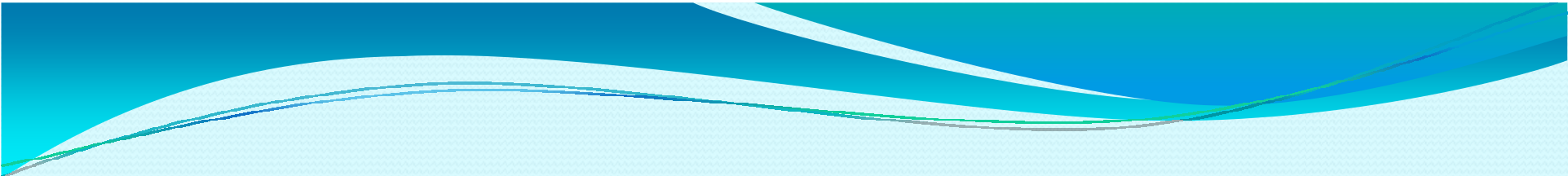






Issues for Discussion

- 1) Should the Department develop a plan? State only plan or a regional plan?**
- 2) To what extent should the Department of Health develop a plan?**
 - **Only improvements at the power plant (inside the fence line)**
 - **Complete plan as outlined by EPA**
 - **Something in-between**
- 3) Should the plan be based on:**
 - **Mass emission limits (mass) - How should allowances (tons of CO₂) be allocated?**
 - **Emission rate limits (rate) – Uniform rate or something else?**
 - **Plant efficiency improvements only?**
 - **State measures plan?**



4) How should accounting of renewable generation emission rate credits (megawatts of electricity) or excess mass allowances be incorporated into the plan?

- **North Dakota takes credit for all renewable generation in the state**
- **North Dakota takes credit for a certain percentage of renewable generation**
- **Owner of the renewable power can decide how to use the credits as they see fit**

5) Should the Department allow trading of emission rate credits or mass emissions (allowances)?

- **No trading at all**
- **In-state trading only**
- **Region wide trading**
- **Nationwide trading**



6) How should “remaining useful life” of each plant considered in the plan?

7) How should the Department incorporate cost and reliability concerns into the plan?

8) Should the Department propose any legislation necessary for implementing the plan?

9) Suggestions for cost effective carbon dioxide reductions.



10) Comments on EPA's three building blocks and how they apply to North Dakota sources.

11) Comments on coordination with the Public Service Commission.

12) Current or projected electrical system reliability issues?

Timing

Department's Comment Period Ends – December 18, 2015

Plan Due (without extension) – September 6, 2016

Plan Due (with extension) – September 6, 2018

Comments

- **Comment period is open until December 18, 2015**
- **Email: airquality@nd.gov**
- **Mail: North Dakota Dept. of Health**

Division of Air Quality

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Bismarck, ND 58501



Questions?



Comments?

Suggestions?

North Dakota Coal-Fired EGUs CO₂ Emissions

